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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,994	06/30/2003	Per Carlsson	003301-062	8183

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EXAMINER	
HO, ALLEN C	
ART UNIT	PAPER NUMBER
2882	

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/607,994	<b>Applicant(s)</b> CARLSSON ET AL.	
	<b>Examiner</b> Allen C. Ho	<b>Art Unit</b> 2882	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 9-16, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 3-8, 17 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>062003</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 20 (Fig. 4). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9, 12, 13, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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4. Claim 9 recites the limitation "each one of said source carrier arrangement". There is insufficient antecedent basis for this limitation in the claim.

5. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 12 and 19 recite the broad recitation 0-45°, and the claim also recites such as 5-25°, preferably 10-15° which is the narrower statement of the range/limitation.

6. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely

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exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 13 recites the broad recitation "each segment comprises or is connected to a respective actuator", and the claim also recites "preferably comprises an arm", which is the narrower statement of the range/limitation. Furthermore, claim 13 recites the broad recitation "for controlling the displacement of the segment", and the claim also recites "wherein the direction of displacement is preferably along the longitudinal axis of the actuator", which is the narrower statement of the range/limitation.

### *Claim Rejections - 35 USC § 102*

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 2, 10, 11, 14, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Rousseau *et al.* (U. S. Patent No. 6,044,126).

With regard to claims 1 and 2, Rousseau *et al.* disclosed a radiation therapy device, comprising: a source carrier arrangement (2) carrying radioactive sources (1); and a collimator body (5) comprising collimator passages (secondary collimators) for directing radiation emanating from the sources toward a substantially common (isocentric) focus, each collimator passage having an inlet for receiving the radiation, wherein at least a subset of the sources is

linearly displaceable (column 4, lines 53-56) relative to at least a subset of the collimator passage inlets, or vice versa, thereby enabling a change of spatial dose distribution surrounding the focus.

With regard to claim 10, Rousseau *et al.* disclosed the radiation therapy device as claimed in claim 1, wherein the subset of collimator passage inlets and the subset of sources are linearly displaceable relative to each other essentially in parallel to the z-axis.

With regard to claim 11, Rousseau *et al.* disclosed the radiation therapy device as claimed in claim 1, wherein at least a portion of the source carrier arrangement has an envelope surface shaped substantially like a frustum of a cone (the portion that accommodates the collimator body 5).

With regard to claims 14-16, Rousseau *et al.* disclosed a method of changing the spatial dose distribution surrounding a focus toward which collimator passages (secondary collimators) direct radiation emanating from radioactive sources (1) carried by a source carrier arrangement (2) of a radiation therapy device, each collimator passage having an inlet for receiving the radiation, comprising linearly displacing at least a subset of the sources relatively to at least a subset of the collimator passage inlets, or vice versa (column 4, lines 53-56).

With regard to claim 18, Rousseau *et al.* disclosed the method as claimed in claim 14, wherein the sources are displaced essentially in parallel to the z-axis in a Leskell coordinate system.

*Allowable Subject Matter*

9. Claims 3-8, 17, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- (1) Krispel *et al.* (U. S. Patent No. 6,512,813 B1) disclosed a rotating stereotactic treatment system.
- (2) Shipeng *et al.* (U. S. Patent No. 6,438,203 B1) disclosed a whole-body radiotherapy device with multiple radioactive sources.
- (3) Kopecky (U. S. Patent No. 5,627,870) disclosed a device for treating cerebral lesions by gamma radiation.
- (4) Song *et al.* (U. S. Patent No. 5,528,653) disclosed a rotational gamma radiating unit.
- (5) Kerjean (U. S. Patent No. 5,448,611) disclosed an apparatus for the treatment of lesions.
- (6) Sundqvist (U. S. Patent No. 4,780,898) disclosed a gamma unit.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen C. Ho whose telephone number is (571) 272-2491. The examiner can normally be reached on Monday - Friday from 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward J. Glick can be reached at (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen C. Ho  
Patent Examiner  
Art Unit 2882

24 November 2004